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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,833	03/30/2001	Alyosha C. Molnar	050321-1830	6238

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EXAMINER

DO, CHAT C

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/821,833

Applicant(s)

MOLNAR ET AL.

Examiner

Chat C. Do

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-13,15-28,30-40 and 42-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-13,15-28,30-40 and 42-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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### **DETAILED ACTION**

1. This communication is responsive to Amendment filed 09/03/2004.
2. Claims 1, 3-13, 15-28, 30-40, and 42-47 are pending in this application. Claims 1, 13, 25, and 37 are independent claims. In Amendment, claims 1, 3, 13, 15, 33-37, and 47 are amended and claims 2, 14, 29, and 41 are cancelled without prejudice, waiver, or disclaimer. This action is made non-final.

### ***Oath/Declaration***

3. Applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration. A statement over applicant's signature providing a complete post office address is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1, 3-13, 15-28, 30-40, and 42-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 1, the term "substantially" in line 13 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill

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in the art would not be reasonably apprised of the scope of the invention. Claims 13, 25, and 37 have the same rejection.

Thus, claims 3-12, 15-24, 26-28, 30-36, 38-40, and 42-47 are also rejected for being dependent on the rejected base claims 1, 13, 25, and 37 respectively.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 25-28, 30-31, 33-40, 42-43, and 45-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Keating (U.S. 5,867,068).

Re claim 25, Keating discloses in Figures 11-16 a signal processing system configured to produce a divider output signal having a period substantially equal to three times a period of a reference input signal (abstract), the signal processing system comprising: a first storage element (first D-flipflop in Figure 15); a second storage element (second D-flipflop in Figure 15); a third storage element (third D-flipflop in Figure 15), where each of the three storage elements is configured to receive a first input (e.g. input into D-pin in Figure 15), and a reference input signal (e.g. 1510 as reference clock), and is configured to provide a storage element output (e.g. 1530) where the divider output signal is obtained from at least one storage element output (e.g. 1550 and

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1595); and where a storage element output from each of the three storage elements is used to provide at least one input to another one of the three storage elements (e.g. as cascade seen in Figure 15) where a phase difference between the output of the first storage element and the output of the second storage element is substantially equal to  $60^\circ$  (e.g. since  $\pi$  as complete pass loop. Thus, each individual flip-flop would phase delay by  $\pi/3$ ). Keating fails to disclose a second input signal into each of the storage element. However, Wong discloses in Figure 5 that each of the storage element has a second input signal (e.g. 49x R as reset). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add a second input signal as reset as cited in Wong's Figure 5 into Keating's invention because it would enable to stabilize the system by resetting machine state.

Re claim 26, Keating further discloses in Figures 11-16 each of the three storage elements comprises a plurality of transistors (e.g. flip-flop constructed by plurality of transistors).

Re claim 27, Keating further discloses in Figures 11-16 with respect to each of the three storage elements, a state of the first input is stored in the storage element at a first point in time (e.g. feedback from 1150 to 1140).

Re claim 28, Keating further discloses in Figures 11-16 a state of the storage element output at a second point in time subsequent to the first point in time is equal to the state of the first input stored in the storage element at the first point in time (e.g. feedback directly from 2<sup>nd</sup> element to the input of the 1<sup>st</sup> element).

Re claim 30, Keating further discloses in Figures 11-16 divider output signal is obtained by combining two of the three storage element outputs (e.g. 1550 and 1595).

Re claim 31, Keating further discloses in Figures 11-16 a phase difference between a third harmonic component contained in a first storage element output and a third harmonic contained in a second storage element output is substantially  $180$  (e.g.  $\pi$ ) since  $\pi$  as complete pass loop. Thus, each individual flip-flop would phase delay by  $\pi/3$ .

Re claim 33, Keating further discloses in Figures 11-16 the divider output signal has a duty cycle substantially equal to 50% (see clock in Figure 16 with 1510).

Re claim 34, Keating further discloses in Figures 11-16 the reference input signal is a local oscillator signal (see clock in Figure 16 with 1510).

Re claim 35, Keating further discloses in Figures 11-16 the signal processing system is a frequency divider (abstract).

Re claim 36, Keating in view of Wong do not disclose the signal processing system is a mobile telephone. However, the examiner takes an office notice that the system of frequency synthesizer is well known in the art in a mobile telephone.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add into a mobile telephone as known in the art into the Keating in view of Wong's invention because it would enable the system to operate at a desired frequency or carrier.

Re claim 37, it is a method claim of claim 25. Thus, claim 37 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

Re claim 38, it is a method claim of claim 26. Thus, claim 38 is also rejected under the same rationale as cited in the rejection of rejected claim 26.

Re claim 39, it is a method claim of claim 27. Thus, claim 39 is also rejected under the same rationale as cited in the rejection of rejected claim 27.

Re claim 40, it is a method claim of claim 28. Thus, claim 40 is also rejected under the same rationale as cited in the rejection of rejected claim 28.

Re claim 42, it is a method claim of claim 30. Thus, claim 42 is also rejected under the same rationale as cited in the rejection of rejected claim 30.

Re claim 43, it is a method claim of claim 31. Thus, claim 43 is also rejected under the same rationale as cited in the rejection of rejected claim 31.

Re claim 45, it is a method claim of claim 33. Thus, claim 45 is also rejected under the same rationale as cited in the rejection of rejected claim 33.

Re claim 46, it is a method claim of claim 34. Thus, claim 46 is also rejected under the same rationale as cited in the rejection of rejected claim 34.

Re claim 47, it is a method claim of claim 36. Thus, claim 47 is also rejected under the same rationale as cited in the rejection of rejected claim 36.

***Allowable Subject Matter***

8. Claims 1 and 13 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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9. Claims 3-12, 15-24, 32, and 44 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 25-28, 30-31, 33-40, 42-43, and 45-47 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721. The examiner can normally be reached on M => F from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaki Kakali can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do

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Examiner  
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December 3, 2004

A handwritten signature in black ink, appearing to read 'T. Ingberg', with a long, sweeping horizontal line extending to the right.

**TODD INGBERG**  
**PRIMARY EXAMINER**